

# Hardware and Software Stack for an SDR-based RFID Test Platform

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**Abstract:**

This paper describes a software defined radio system for measurements of minimum activation power and backscatter power of UHF RFID tags. We propose a platform for performance testing of tags, which is based on a general purpose universal software radio peripheral (USRP) and optimized for operation in the frequency band from 700 MHz to 1100 MHz at the output power of 2 W ERP. The presented HW and SW stack extends the standard library of USRP with RFID specific functions, an interface to LabVIEW, and by a top level LabVIEW code for automated testing.